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UNIVERSITY OF ALBERTA

PET ASSISTED THERAPY AT AN EDMONTON AUXILIARY HOSPITAL

BY

LILLIAN G. BOWES

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH IN

PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF

MASTER OF EDUCATION

IN

ADULT AND HIGHER EDUCATION

DEPARTMENT OF ADULT, CAREER AND TECHNOLOGY EDUCATION

EDMONTON, ALBERTA

SPRING 1991

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ISBN 0-315-66677-3

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Dr. C. J. Kanchier

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Date: Spring 1991

DEDICATION

To the memory of Andy, Misty and Paddy,

and to their beloved owners.

Abstract

The purpose of this research was to determine if pet visits to an institution increased the physical activity and social interaction of the residents. Specifically, an effort was made to determine if activities such as eye contact, smiling, laughing, talking, and touching changed during a pet visit.

The study was undertaken at an Edmonton auxiliary hospital based on Isaac and Michaels' (1972) definition of case and field research. This definition allowed the study to concentrate on specific factors within the institution. The hospital chosen for the study provided extended care for persons with physical handicaps and chronic or terminal illness.

A literature review revealed that the majority of research previously undertaken in institutional settings had indicated that the presence of pet animals increased the happiness and alertness of the residents. However, research undertaken in non-institutional settings had not provided equally positive results. Despite the differences in the findings, pet programs have been introduced into many institutions in the United States and Canada.

At the time of this study, the Pet Assisted Therapy Program (PAT) had been operating at the auxiliary hospital for two years. For the study, eight pet owners and seven pets were used in visits to sixty-three residents. The residents had an average age of 80 years and were observed for 10 minutes before, during, and after the pet visit. Data were collected on eleven activities.

The results showed a significant increase in the activity levels of the residents during a pet visit. These increases diminished rapidly when the pets left. Responses from staff members and pet owners showed support for the pet program and a feeling it contributed to the happiness of the residents. The pet owners also thought the pets helped the residents' memory and facilitated social interaction.

Recommendations for the pet program at the auxiliary hospital include bi-monthly meetings for new volunteers, the provision of information to staff members on the health of the animals, and continuation of the program.

Recommendations for future research include studying the effects of pet programs on Alzheimer's disease and the effects of keeping pets within institutions. A role for adult education is also suggested.

Acknowledgements

Thank you to those whose dedication and energies are part of this thesis: Ray Pinkoski, Administrator, for approving this study; Heather Mattson, Brenda Houston, Brenda Lynne Waddle, and Diane Prysko, Volunteer Co-ordinators for offering their support and sharing their knowledge; the staff of both hospitals for cooperating and assisting with data collection; the pet owners for giving of their time and insight; Pam Young, Education Co-ordinator of the Edmonton Society for the Prevention of Cruelty to Animals, for providing information on pet projects in the Edmonton area; Dr. Carole Kanchier, my thesis advisor and Committee Chairman, for giving wisdom, encouragement, and hours to guide me through this work; Dr. E. E. Fox, my Co-Chairman, for offering his valuable suggestions; Dr. A. G. Konrad and Dr. E. Miklos, members of my thesis committee, for contributing their knowledge and experience; and Margaret Graham for typing the final manuscript with patient attention to every detail.

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CHAPTER I

Introduction

Canadians are living longer. This simple fact creates a problem for both the individual and for society. The individual worries about maintaining a reasonable quality of life as he or she ages; the society worries about providing the funds as more elderly people need services. The individual's concern is evidenced by the number choosing death by suicide rather than a life of diminished quality (Johnson, Greenwalt, & Hauser, 1990; Friedman, 1990). Society's concern is evidenced by commissions on health care (Premier's Commission on Future Health Care for Albertans, 1989).

In an effort to gain a better understanding of the psychosocial milieu of geriatric institutions, research has been focused on their characteristics and effects. Some of the findings could only bring more fear to an aging society (Creighton, 1989). For example, Corson and Corson (1980) found institutions tended to perpetuate and exacerbate the very deficiencies which brought the residents there in the first place. They indicated many residents suffered from loneliness, depression, hopelessness, helplessness, boredom and low self-esteem. In addition, the social structure of such institutions was generally found to be closed, regimented, and lacking in privacy. As a result, the residents tended to lose a sense of purpose, and a feeling of being needed, respected and loved. Many suffered from sensory deficits, particularly in the areas of tactile contact and auditory acuity.

Corson and Corson (1980) also pointed out that for many elderly people moving to an institution was in itself, very traumatic even if the move was a voluntary one. Along with a drastic life change, the aged also had to deal with parting from family, friends and neighbours. Often too, they had to endure parting from a beloved pet, thus breaking the last link with a satisfying social interaction and setting the stage for psychological and physical deterioration.

Perhaps such findings were the reason pet facilitated therapy so quickly caught public attention (Sheesley, 1980; Brody, 1982; "Pets are," 1982; Martin, 1983; Melcombe, 1985; Blake, 1986; "Together again," 1987). Pet facilitated or pet assisted therapy arose from the common experience that pet animals appear to help in developing communication and social interactions (Andrysco, 1982). According to Boris Levinson (1972) and S. A. Corson and E. O. Corson (1980) pet animals may serve as mediators and effective socializing catalysts in clinical and institutional settings. They indicate pet animals seem to allow people to relate to each other more easily thus diminishing the separation and detachment frequently found in individuals who live in an institutionalized setting.

Statement of the Problem

In view of an aging population, the concerns expressed over institutional care, and the supposed benefit of the human-animal relationship, this study was designed to gain information on pet facilitated therapy at an auxiliary hospital in Edmonton, Alberta. The hospital has a pet visitation program whose objectives are based on the philosophy of restoring physical, mental, and social

well being to the residents. The study was designed to determine if the physical activity and social interaction of the residents increased both during and after a pet visit. Specifically, an effort was made to determine if behaviours such as eye contact, smiling, laughing, talking and touching changed during an animal visit. The study was also planned to gather information on the perceptions of staff and pet owners toward this program.

Critics have questioned the value of human-animal associations and regarded the whole concept as a "soft science." Bustad (1984) said many clinicians questioned if animal association was really therapy; others dismissed it as trivial (Michaels, 1982). In addition, Katcher (1984) reported that a critical review of the literature suggested there was no evidence that companion animals had therapeutic effects. He noted that controlled studies demonstrated either no effects or effects which could be accounted for by experimenter bias, novelty, or additional social contact as a result of people accompanying animals into health care settings. Very frequently, too, proponents of pet therapy were viewed as simply being sentimental (Ryder, 1973). Therefore, in 1984, the Delta Society hosted a conference to determine the research questions that needed to be studied in the human-animal interaction and the best strategies for addressing them (Zeglin, Lee, & Brudvick, 1984).

Two groups of researchers participated in the conference. One group was involved in human-animal research while the second group was from a mix of disciplines including medicine, sociology, and anthropology. After these two groups of scientists

met and discussed the problems surrounding research on the interactions of animals and people, they concluded the methodological issues underlying the study of the human-animal relationship were not unique. They felt scientists in other fields had faced and solved similar methodological problems, and they encouraged that research continue with careful attention to experimental design and to securing of representative samples (Journal of the Delta Society,1984).

The findings of this conference were of importance to all societies that have aging populations who might benefit from pet therapy. The United Nations defines a national population as aged when over 7 percent of the country's people are 65 years of age or older, (U.N. Demographic Yearbook, 1981). In Canada, in 1891, only 4.5 percent of the population was over 65 (Chappell, Strain & Blandford, 1986), but by 1981, the percentage of people over 65 had risen to 9.7 percent giving Canada an aged population. This trend is likely to continue so that by the beginning of the next century between 12 and 17 percent of the population will be 65 years of age or older (McPherson, 1983). For the first 30 years after the turn of the century, dramatic increases in these percentages are expected as the baby boom generation ages. In Alberta, a 39 percent increase in the number of people over 65 is expected by the year 2005 (Premier's Commission on Future Health care for Albertans, 1989). These anticipated increases have led to a growing concern that there will be escalating demands on the health care system to meet the needs of this growing segment of the population (Chappell, Strain & Blandford, 1986).

Also of note is the manner in which gender distribution among the elderly population impacts the health care system. At present in Canada, the gender ratio of the over 65 population is 86 males for every 100 females. This is probably the result of women having a longer life expectancy than men. In Canada, the life expectancy for men is 71.5 years, and for women 78.7 years (Chappell, Strain & Blandford, 1986). In view of this longer life expectancy, and because they tend to marry men a few years older than themselves, women can usually take care of their husbands until the husband's death. However, the women themselves then may have no one to care for them during their remaining days. For such women, nursing homes become the only alternative. The higher number of women in institutions was evidenced by the 1986 census, which indicated one in three women and one in five men aged 80 or older lived in collective or non-private households such as rest homes and nursing homes ("Aging Canadians", 1988).

If the introduction of pets into geriatric institutions can contribute to the well being of the residents, one more way to address public and private concerns may be readily available.

Design and Scope

A study was undertaken at the hospital based on Isaac and Michaels' (1972) definition of case and field research. They defined such research as the intensive study of the background, current status, and environmental interactions of a given social unit: an individual, group, institution or community. The scope of the study was restricted to collecting data over a three week period on

the activity level of the residents before, during and after a pet visit. Isaac and Michaels (1972) approve such restriction in a case and field study by stating the scope of such studies may encompass a selected segment of a life cycle and concentrate upon specific factors. The hospital chosen for the study provided extended care for persons with physical handicaps and chronic or terminal illness.

Limitations and Delimitations

The results of this study are limited by to the short term, three weeks, over which data were collected. Andrysco (1982) stated that the evaluation of any new therapy is hampered by the difficulties associated with identifying the precise factors that contribute to the improvement or lack of improvement in the individual. He commented further on the difficulty of selecting experimental and control groups that were similar because of the great variability in diagnostic categories in care facilities. Therefore, he felt that the best form of control in these studies was a longitudinal design using each individual as his or her own control He further recommended that the longitudinal design should include follow up studies of both long-term and new incoming residents to further ensure a well controlled study.

A major limitation may also result from the difficulty in determining whether or not all residents who were selected for this study were cognizant of their surroundings. The Volunteer Coordinator of the hospital indicated that a small percentage of the residents appeared cognizant at all times, a small percentage were in a coma, and the remainder were sometimes confused. Yet all of

the residents, even those in a coma, occasionally responded through eye contact or hand movements. After discussions with the nursing staff, all residents were regarded as being capable of responding to stimuli.

The outcomes of this study are restricted to the sample specified and for the time period during which data were collected. Generalizations to other age groups or other elderly populations should be made with caution.

Overview of the Report

In the following chapters, the literature relevant to this study is reviewed. The literature review is followed by a chapter outlining the research design and the procedures used in the study. The next chapter presents and discusses the results. In the final chapter, conclusions and suggestions for future research are summarized.

CHAPTER II

Review of the Literature

For the past decade, a growing body of research has concentrated on the interaction of humans and pet animals (Andrysco, 1982; Beck, 1985; Bustad, 1978, 1984; Corson & Corson, 1980; Cusack & Smith, 1984; Winkler, Fairnie, Gericevich, & Long, 1989). Interest in the study of human-animal interactions has increased because some research (Andrysco, 1982; Bustad, 1978, 1984; Corson & Corson, 1980) demonstrated that animals have a therapeutic value for many people. The literature reviewed for this study encompassed studies on companion animals undertaken in both institutional and non-institutional settings (Andrysco, 1982; Bustad, 1978, 1984; Corson & Corson, 1980; Goldmeier, 1986; Mugford & M'Comisky, 1975; Voith, 1985). The development of pet programs in North America and Alberta was also considered (Blake, 1986; Levin, 1986; Martin, 1983; J. Watz, personal communication, August 8, 1990; P. Young, personal communication, February 23, 1987).

Research in Institutional Settings

The use of animals in institutions to stimulate the residents and to normalize the environment is not new. The practice was recorded as early as 800 A.D. at Gheel in Belgium (Bustad, 1984). Later, in 1792, the York Retreat in England used animals as therapeutic aids in the treatment of the mentally ill (Bustad, 1984;

Frank,1984). As part of their treatment, patients were given the care of a pet. The Bethel Center in Bielefeld, Germany, which is home to over 5000 handicapped people, adopted a similar practice in 1867 and still continues the practice today (Bustad, 1978). During and after World War II, Pauling Hospital in New York, and after World War II, Beitostolen in Norway used animals in the rehabilitation of veterans (Bustad, 1984; Frank, 1984). At Pauling, the use of dogs as a form of therapeutic recreation was so successful that a dog training class became a daily adjunct to the rehabilitation program.

However, research into the interaction of human and animals was not undertaken until a psychologist, Boris Levinson (1972), did pioneer work with disturbed children. He found that pets allowed him to communicate with the children where other therapeutic techniques had failed. Levinson (1972) underlined the need for more research with objective measures because his own work had been primarily of an anecdotal nature. His results did, however, alert others to the role of animals as facilitators in therapy.

One of the first studies in this area undertaken in an institutional setting was done by Samuel Corson and his associates in 1975 (Andrysco, 1982). They conducted a study on the interactions between the patients, the staff, and pets at the Ohio State University Psychiatric Hospital. Videotapes were used to record patients before and during interactions with pet animals. Analysis of the videos revealed that the patients responded significantly more quickly to questions in the presence of animals and increased the number of words in their responses. Corson did

note, however, that their controls were deficient because they had been unable to withhold other forms of therapy from the patients for ethical reasons.

In 1975, Corson moved the research on Pet Facilitated Psychotherapy (PFP) to the Castle Nursing Home with the aim "of quantifying patient responses to PFP and of investigating effects of PFP on staff morale and performance" (Corson & Corson, 1980, p.99). At this nursing home, in a similar study, he used videotape recordings of resident-pet-staff interactions "to quantify verbal and temporal parameters of the residents' social interactions and the effects of the pet animals on the tactile and other forms of non-verbal communication patterns" (Corson & Corson, 1980, p.99). In addition, a questionnaire was developed and incorporated into the nurses' notes. The questionnaire was developed using a 10-point scale so that the nurses could check appropriate items related to the physical and emotional well-being of the resident, social interactions with other residents and staff, and changes in personal hygiene, appearance or quantity of medication.

The results indicated that pet animals were effective socializing catalysts and "thus helped to improve the overall morale of the institution and create a community out of individuals, many of whom were separated, detached, unhappy and self-pitying" (Corson & Corson, 1980, p.101). In some cases, being involved with the pet dogs helped involve the residents in other rejuvenating activities such as walking and painting. The animals were also seen as a source of emotional support to residents with terminal illness. The researcher concluded that the program served as a form of therapy

and helped to transform dependent, self-neglecting behaviour into more self-reliant modes of interaction. This study, with its emphasis on quantifying parameters, helped give credibility to pet facilitated therapy. Gradually research of a more serious nature than the reporting of anecdotes followed.

Seven years later, another animal study at a geriatric institution was undertaken by Andrysco (1982) at Westminster Terrace in Ohio. At that time, Westminster Terrace housed 185 residents and provided three different levels of care which ranged from care for the totally dependent resident to care for the relatively independent resident. The research was conducted for 51 weeks. From week 38 to week 47, a pet animal was brought to the facility daily; pet interaction data were collected via video tape, a rating scale, and audio tapes. From week 48 to 51, the pet animal was no longer brought to the facility. Post-pet visitation data were collected again by videotapes, a rating scale, and audio tapes.

Analysis of the videotape recordings by tabulating the responses showed all of the subjects responded favorably to the dog, "as reflected in changes in eye-contact, smile, tactile contact, verbal response time, number of words in response, number of questions asked, verbalization of violence, and delusions" (Andrysco, 1982, p.89). In addition, by carrying a tape-recorder with a hidden microphone, Andrysco unobtrusively recorded observations on staff members and residents. The analysis of these observations also supported the catalyzing effect the dog had on conversation and socialization.

Andrysco (1982) concluded this investigation by suggesting a therapeutic pet may offer residents of a geriatric institution a form of tactile contact and non-verbal communication leading to the alleviation of loneliness, depression, helplessness, and social withdrawal. He further concluded pet-therapy could act as an effective form of therapy in that it aided in the elimination of verbal violence and delusions. He felt that these combined effects could "lead to the improvement of the overall morale of the institution and create a community out of individuals" (Andrysco, 1982, p. 90).

The view that animals have a catalyzing effect on conversation and socialization was supported in an anecdote reported by Frank (1984). As a graduate student, she was part of a patient/resident group discussion on re-motivation and reminiscence. Frank brought her own dog to the group and found the dog's presence resulted in animated discussion of animals in general, preferences and dislikes of various kinds of animals, and reminiscences about previously owned pets. After the group discussion ended, Frank left her pet on a patio near the residents. She found the presence of the animal led to increased resident interaction both with other residents and staff members. This study was not continued because Frank died in 1983; however, a paper she had prepared was published posthumously (Frank, 1984).

In another study, Hendy (1987) compared residents receiving visits from people alone to visits from people accompanied by pets, and visits from pets alone. The behaviours of proximity, talking, smiling, ambulation and alertness were recorded.

While all three types of visits increased the behaviours of smiling and alertness, the factor which had the most positive effect on resident behaviour was the proximity (within 3 feet) of a human visitor.

Another investigation (Winkler, Fairnie, Gericevich, & Long, 1989) was done using a longitudinal research design and behavioural mapping to observe interactions among residents and staff after a dog was brought into a nursing home. Six weeks after the dog's arrival, there was an increase of interactive behaviours noted for both residents and staff. Twenty-two weeks after the dog's arrival, interactive behaviours remained high for the staff but had returned to baseline levels for the residents.

In general, the research on pet facilitated therapy on an institutional setting revealed conflicting findings. On one hand, pet facilitated therapy was seen as having a salutary effect on physical and mental well-being. In two cases, this effect was perceived as beneficial (Corson & Corson, 1980; Andrysco, 1982) in alleviating loneliness, depression, helplessness, and social withdrawal in an institutionalized setting. On the other hand, pet facilitated therapy was seen, at best, as of temporary benefit, and secondary in nature to interaction with humans (Barry, 1984; Goldmeier, 1986; Robb & Stegman, 1983).

Research in Non-Institutional Settings

In an effort to gain more insight into these conflicting points of view, studies were examined on the interaction between humans and pet animals which had taken place in non-institutional

settings. Mugford and M'Comisky (1975) studied a group of elderly pensioners to determine the effects of pets on the social attitudes as well as on the mental and physical health of their owners. An experimental design involving a pre- and post-test questionnaire was used to determine the pensioners' attitudes toward other people, the environment, and their own physical and psychological health. The pensioners were divided into three groups with one group being used as a control group. In the two experimental groups, Group 1 was given a budgie bird, and Group 2 a house plant. A social worker visited each pensioner once a month over a five month period after which the questionnaire was re-administered. A significant difference in "before" and "after" responses was found only in the pensioners who had been given the birds.

The attitudes showing the greatest change were those dealing with psychological and physical well-being. The pensioners who had birds as pets saw themselves as mentally and physically healthier. The researchers concluded that the birds had become objects for empathy and communication, as well as a topic of conversation with visitors. Unfortunately, the study was based on small sample sizes: experimental groups of 12 each and a control group of 8. The reliability of the study was further called into question when a replication failed to confirm the differences (Serpell, 1984). Despite these shortcomings of his research, Mugford (1980) suggested that the psychological importance of pets had increased in industrialized societies due to rising affluence, decreasing birth rates and loosening of family ties. Mugford indicated companionship was the single most important aspect of

pet ownership in that it satisfied the need for affiliation with others and raised self-esteem. He also felt there was nothing to indicate that pet owners were less psychologically healthy than non-pet owners nor that owning a pet in any way diminished relationships with people.

Brown (1985) supported Mugford's contention that as industrialization decreased the size of the family unit and reduced contact with extended family members, pets, particularly dogs, gained status because they filled the void created by having fewer people in the home. Brown also pointed out that attitudes about pet ownership had undergone a significant change from 1960 to 1980. Formerly owning a pet had been considered immoral in a world of limited resources. As well, pets were perceived as being dangerous to human health. However, the effectiveness of rabies and distemper vaccines and the development of drugs to control parasites reduced the danger to human health. In addition, the research findings concerning possible beneficial effects of pets on human health and well-being began to emerge. Also, the standard of living in North America developed to a point where resources could be spent on a non-productive animal. As a result, Brown indicated societal changes came about allowing pet ownership to flourish and pet visitation programs for nursing homes to be established.

Despite these changes in society, not all studies in communal settings found association with pet animals to be of benefit. Goldmeier (1986) found pets only made a difference for those living alone, and at best, only attenuated the loneliness felt from the lack of human companionship. Similarly, data analyzed

from 56 clients of a home health service, whose ages ranged from 20 to 93 years of age, indicated no relationship between owning a pet and measures of physical or mental health (Robb & Stegman, 1983). Similar conclusions were reached by Ory and Goldberg (1985) who undertook structured interviews with 1073 non-institutionalized married white women between the ages of 65 and 75. The purpose was to examine the role of pet ownership as a predictor of perceived happiness in elderly women. Although the presence or absence of a pet did not seem to be related to happiness, women who reported not being very attached to their pets were also the most likely to be unhappy. The investigators felt some women might be less likely to have attachments either with other humans or with pets. If this speculation were true, pet visitation programs to elderly women in institutions could be of limited benefit in terms of improving the quality of their lives. The researchers did acknowledge, however, that the design of their study made it impossible to determine a causal relationship between study variables and perceived happiness. For example, it was not clear whether social attachments brought happiness or if happy women were more likely to develop social attachments.

Some insight into what criteria could be used as indicators of a beneficial attachment between people and pet animals came from Voith (1985). After studying 1500 questionnaires responses at the Veterinary Hospital of the University of Pennsylvania, and completing a study on why people kept pets with serious behaviour problems, she stated, "The activities that serve as attachment mechanisms between people

also occur between people and their pets" (Voith, 1985, p.292). Among the significant factors which served as attachment mechanisms between people were proximity, duration of time spent together, the sharing of emotional expression, and visual, vocal, or tactile signals of happiness or unhappiness such as smiling, laughing or touching. She indicated these same or very similar factors also played a role in the attachment between people and animals. In part, due to Voith's findings, smiling, laughing, and touching were used as measures in the present study as indicators of attachment, happiness and improved quality of life.

Pet Programs

Even though differing points of view were expressed in the research, pet programs have emerged in many institutions in North America. Pet programs usually involve the visit of a pet animal accompanied by its owner to an institutional setting once or twice a week. The practice of introducing pet programs into institutional settings has spread very quickly. A letter written by the researcher to the Delta Society in November, 1986, requesting information on pet programs was answered with the names of 30 contact persons for a variety of institutions offering pet programs in the United States and Canada. Contact with the San Francisco Society for the Prevention of Cruelty to Animals (Levin, 1986) showed its Animal Assisted Therapy Program was serving over 100 care centres in San Francisco alone. The recipients ranged from AIDS patients, through inmates in the city's jails, to frail elderly people.

In Alberta, pet programs have been adopted in a number of institutions. The Education Coordinator of the Edmonton Society for the Prevention of Cruelty to Animals said the first animal program started in Calgary in 1979 (P. Young, personal communciation, February 23, 1987). The program was initiated by the Calgary Humane Society but has since been taken over by an independent agency. With the agency's help, programs are now in place in nursing homes, auxiliary care centres, and the Alberta Children's Hospital (Martin, 1983). In the spring of 1987, a telephone poll by the researcher of hospitals in the Edmonton area indicated 20 auxiliary hospitals and the Edmonton General Hospital had some form of pet program. One nursing home in Stony Plain and one in St. Albert also had programs as did four nursing homes in Red Deer. These programs were thought to have been of particular help for patients with Alzheimer's disease (Blake, 1986).

The Occupational Therapist at the Medicine Hat Regional Hospital also said the pet visitation program at that hospital had been of help for patients with Alzheimer's disease (J. Watz, personal communication, August 8,1990). Whether because of the novelty of animals in a hospital setting, or because of a deeper attachment to animals than humans, Watz said Alzheimer patients responded to animal visitors when they would not respond to humans.

Summary

Industrialization has both increased the resources available to a family while decreasing the size of the family unit and reducing contact with extended family members. As a result,

the significance of pet animals to humans appears to have changed. Pets now seem to fill the void created by having fewer people in the home. It is now also morally acceptable to expend resources on them.

Coupled with these changes has been the development of vaccines and drugs for pet animals which has protected human health. Therefore pet ownership has flourished and pet programs in institutions have been established.

Studies in community settings seemed to indicate that human association was of greater benefit to humans that association with pet animals. However, studies in institutional settings seemed to indicate that pet animals could act as a catalyst to increase the alertness and well-being of isolated, withdrawn residents. As a result, pet programs which involve the visits by pet animals to many differing institutions have quickly evolved.

CHAPTER III

Research Design and Procedures

The need for elderly people to have quality health care at a reasonable cost coupled with the benefits and low cost attributed to pet visitation programs led to investigating a specific problem concerning companion animals as the subject of this research. An institution with a well established pet program became the focus of a field and case study. The methodology of the study is described in this chapter.

Specific Problem

A variety of factors determined the specific problem for investigation: the problem of determining if a pet visitation program increases the physical activity and social interaction of the residents in an institution during and after a pet visit. Among the factors considered were Canada's aging population ("Aging Canadians", 1988), and the knowledge that many of these aging Canadians will be institutionalized due to the lack of home care facilities (McDaniel, 1986). Studies have shown that institutionalization may lead to psychological and physical deterioration, but that such deterioration may be alleviated by pet programs (Corson & Corson, 1980; Andrysco, 1982). Pet programs have the additional benefit of being an inexpensive form of therapy (Mugford, 1980). As a result, these programs may contribute to meeting a challenge identified by the Premier's Commission on

Future Health Care for Albertans (1989); the challenge of providing economic quality care to institutionalized elderly people.

A pet program at an Edmonton auxiliary hospital was chosen as the focus of this study. The hospital has 198 beds and has been in existence since 1927. Its aim is to provide care for persons who will benefit from therapies which will rehabilitate them into the community. The hospital also provides extended care for persons with physical handicaps, and chronic or terminal illness.

Research Questions

The literature reviewed indicated that: (a) pet therapy can improve the quality of life in institutions (Corson & Corson, 1980; Andrysco, 1982); (b) visual, vocal, and tactile signals of happiness such as smiling, laughing, or touching are manifestations of attachment between people and animals (Voith, 1985); and (c) a greater proportion of Canada's elderly will be female (Chappell, Strain & Blandford, 1986). Based on this literature, a number of questions were generated relevant to the statement of the problem in Chapter 1, that is, "Are the residents' more physically and socially active both during and after a pet visit?"

The study was designed to provide data relevant to the following five questions.

1. Is there a change in activity level of residents during and after a pet visit?

2. Is any change in activity level still evident ten minutes after a pet visit?

3. Is there a difference between the activity levels of males and females during a pet visit?

4. Are there differences between the activity levels of males and females 10 minutes after a pet visit?

5. Is there staff support for the pet visitation program?

Information was also gathered from the pet owners on their perception of the pet program and any changes they felt were needed.

Instrumentation

To facilitate the design and procedure of this study, preparatory work was done on instrumentation. Two of the instruments prepared for this study were based on instruments used by the Calgary Society for the Prevention of Cruelty to Animals and the San Francisco Society for the Prevention of Cruelty to Animals for evaluating their pet programs. These were: (a) the Pet Owners' Comments on Pet Assisted Therapy (see Appendix A); and (b) the Staff's Comments on Pet Assisted Therapy (see Appendix B).

The first instrument, the Pet Owners' Comments on Pet Assisted Therapy, required the pet owners to rate the activity level of the residents. Activities such as laughing or talking and looking at or stroking the animal were rated on a five point scale ranging for each observed activity from "very infrequently" to "very frequently." In addition, this instrument asked the pet owners to answer five open-ended questions on their experiences, and to give any suggestions they had for enhancing the program.

The second instrument, the Staff's Comments on Pet Assisted Therapy, asked the staff to give their perceptions of the activity level of the residents, and whether they thought the pet program was beneficial to the residents. In addition, the staff were queried as to whether: (a) the pet program disrupted their work schedule; (b) increased their work-load; or (c) created a sanitation problem. They were also invited to include any other comments they considered relevant.

A third instrument, the Unusual Incidents Form, was designed to document any unusual behaviour on the part of the residents. In both Corson & Corson's (1980) and Andrysco's (1982) studies, rather dramatic incidents pertaining to the reduction of violence and increased socialization of individual residents were reported. The form was designed to capture such incidents if they occurred (see Appendix C).

A fourth instrument, the Activity Observation Form, was developed to record the activity level of the residents before, during and after a pet visit (see Appendix D). In this instrument, the definitions used for the residents' activities were based on the definitions used in Andrysco's (1982) study. These definitions included: (a) eye contact as any direct eye contact from the resident toward the facial area of an individual; (b) body movement as any meaningful movement of the body other than touching an individual or animal; (c) crying as sobbing accompanied by tears; (d) smiling as any upward curving of the mouth accompanied by a bright and happy facial expression; (e) talking as the expression or exchange of thoughts in audible words; and (f) touching as any physical contact

initiated by the resident and directed toward an individual or pet. This instrument also had provisions for recording other behaviours such as sleeping, reading or watching television.

The Pilot Study

In February, 1987, a pilot study was undertaken with eleven residents at an extended care centre. The centre was chosen because it provided care and had a pet program similar to the auxiliary hospital. The pilot study was done to ascertain need for revision to the instruments.

Revisions were made to the Activity Observation Form due to the varying time periods pet owners spent with the residents. It had been originally planned to take observations on all the residents' activities every two minutes for a 10 minute period before, during, and after a pet visit. Since the pet visits varied in length, each activity was just noted once if observed within a 10 minute period before, during, or after a pet visit.

The Design

Upon completion of the pilot study at the extended care centre, the research at the auxiliary hospital was undertaken. The design was based on Isaac and Michaels' (1972) definition for case and field research as presented in Chapter 1. This definition makes provision for the study of specific factors in an institution. The pet program at the auxiliary hospital was chosen on the advice of the Education Coordinator of the Edmonton Society for the Prevention of Cruelty to Animals who viewed this program as being well organized

(P. Young, personal communication, February 23, 1987). At the time of this study, the Pet Assisted Therapy Program (PAT) had been in place at the auxiliary hospital for approximately two years. The program had been started with five pet owners; as many as twenty-five pet owners had been involved at any one time. Eight were actively involved during the study. Seven animals owned by these individuals, five dogs and two cats, were used in the pet visits.

The pet owners taking part in PAT scheduled their visits to the hospital during the day between 10:00 A.M. and 6:00 P.M. Each pet owner had specific residents he/she visited each week; however, all of the owners would also stop and talk with any resident who displayed an interest in the owner or the pet. Most volunteers walked through all floors of the hospital visiting residents in their rooms, the hallways and the sun rooms or recreation areas. They knew many of the residents by name, were aware of their activities, and had knowledge of their personal lives.

About one-half hour before an owner entered the hospital, discussions were held on which residents and floors the pet owner planned to visit that day in order that data could be collected within a 10 minute period before, during, and after a pet visit. Data were recorded for active and inactive behaviours during these time periods. In addition to recording these data, feedback on PAT was solicited from the staff and the pet owners through use of the two questionnaires: the Pet Owners' Comments on Pet Assisted Therapy and the Staff's Comments on Pet Assisted Therapy (see Appendices A and B).

The Sample

The majority of the residents at the auxiliary hospital were over 70; however, they ranged in age from 28 to 100 years. The average age of the residents was 80 years. The residents had a wide variety of physiological and psychological illnesses which required long term care. Approximately 98 percent of them were confined to wheelchairs. Most also suffered from some degree of loss to hearing, vision, or memory.

Sixty-three subjects, 31 males and 32 females, were randomly selected from this population of 192 residents.

Data Collection

Observations were made of the residents before, during, and after visits of pet owners and their animals to the hospital. These observations were made at 10:00 A.M., 1:00 P.M., and 6:00 P.M. over a period of three weeks. Wearing a volunteer's smock to remain unobtrusive, the investigator preceded the pet owner into the hospital taking observations on the residents the pet owner planned to visit as well as on other residents whose names had been randomly drawn for inclusion in this study. The residents were readily identifiable either by room and bed number or by their names on their wheelchairs.

For a 10 minute period before the pet owner and pet arrived on the floor, observations were made on the activities under investigation. If the activity was observed, it was recorded once. Then the resident's activities were observed while being visited by a pet. The length of a visit varied from a few moments to

approximately 10 minutes. Each activity displayed was recorded once during the period of time a pet owner stayed with the resident. After the pet owner and pet left, the resident's activities were observed for 10 minutes. Each activity displayed was recorded once.

As the researcher preceded the pet owners into the hospital, eight of the randomly selected residents were observed twice at 10:00 A.M., and nine residents were observed three times at 1:00 P.M. before they were visited by a pet. Over the course of the 3 week period, all residents that had been randomly chosen were visited at least once by a pet owner and pet. The data collected before, during, and after these visits were used for analysis purposes.

The Volunteer Coordinator distributed the questionnaires to the eight pet owners involved in the study. Six questionnaires were returned to the Volunteer Coordinator's office in sealed envelopes. In one instance, a couple indicated they had completed the form together. Therefore, seven of the eight pet owners responded to the questionnaire.

The Volunteer Coordinator also distributed questionnaires to 50 members of the staff. The following categories were included: housekeeping (7), nursing (7), dietary (7), recreation (7), occupational therapy (7), physiotherapy (7), and administration (8). Thirty-six of the fifty forms were returned to the Volunteer Coordinator's office in sealed envelopes.

Data Analysis

Data from the Activity Observation Form were analyzed using two-way analysis of variance with repeated measures on one factor (Winer, 1971, p. 518-539). Analysis of variance was chosen since, in general, it is very robust to departures from the assumptions that: (a) the population variances associated with each treatment are equal; (b) each treatment population is normally distributed; (c) the effects behave in an additive fashion; and (d) the errors are statistically independent or uncorrelated (Pfaffenberger & Patterson, 1977). Pfaffenberger and Patterson (1977) stated that if significant differences exist among the factor means, typically analysis of variances will "sense" the differences even if the assumptions are not entirely satisfied. Therefore, the power of the F test used in this analysis technique is not seriously affected by departures from the assumptions.

In the event that the population variances associated with the treatments, for example, talking or touching, were not equal, or that they were neither normally distributed nor additive, the F tests would not be seriously affected. In an effort to satisfy the fourth assumption, statistical independence of the errors, randomization was used.

Percentages were used in the analysis of the staff questionnaire, Staff Comments on Pet Assisted Therapy, since the data collected from this instrument did not lend themselves to inferential analysis. The pet owners' perception of the frequency with which activities occurred during a pet visit were simply tabulated.

Summary

In an effort to gain more insight into the potential benefits of pet visitation programs in an institutional setting, a case and field study was undertaken at an auxiliary hospital in Edmonton, Alberta. After testing the instruments in a hospital with similar residents and care facilities, data were collected over a three week period on the physical activity and social interaction of the residents at the auxiliary hospital during and after a pet visit. As well, questionnaires were distributed to both hospital staff and the pet owners asking for their opinions on the pet program. The data collected were analyzed by use of statistical methods.

CHAPTER IV

Results

In this chapter, results of the data analyses are presented for each research question relating to the activity levels of residents. The questionnaire responses of hospital staff and pet owners are also presented. The chapter concludes with a summary of the results.

Activity Level

The data relating to activity levels of residents during and after pet visits were analyzed by performing a two-way analysis of variance for each of eleven activities. Since there was a possibility of an interaction between gender and time, a first step in the analysis was to test for this effect. The F-ratios and probabilities are presented in Table 1. Only one of the F-ratios, that for touching, was significant at 0.05 level. An examination of the cell frequencies indicated that the significant F-ratio could be accounted for by zeros in three of the cells. The absence of a general interaction between gender and time provided the basis for proceeding to address the research questions relating to differences between males and females as well as for the combined sample across the time periods.

TABLE 1

F-Ratios and Probabilities for Gender*Time Interaction in Analysis of Variance

Activity	F-Ratios	Probability
Eye Contact	2.10	.127
Body Movement	1.01	.367
Crying	1.03	.359
Smiling	1.61	.203
Laughing	1.18	.310
Talking	2.13	.122
Touching	3.16	.045
Other Active	1.67	.192
Silent	2.26	.109
Sleeping	0.09	.911
Other Inactive	0.97	.382

Question 1: Is There a Change in Activity Level of Residents During and After an Animal Visit?

The results of the analysis of variance (see Table 2) showed that, generally, the residents became more physically and socially active during a pet visit. Seven residents who were sleeping woke up to see the pet visitors. In addition, these seven residents and many of those who had been silent, watching television, or listening to music, took time to pet the animals, converse with the pet owners, smile and laugh. In answer to Question One, "Is there a change in activity level of residents during and after a pet visit", the F-ratios showed a highly significant difference over time ($p<.01$) for all of these behaviours. Only the two residents in an apparent coma or semi-conscious state showed no significant change in behaviour as indicated in Table 2 under "Other Inactive." The members of the staff were disappointed that one of these residents, a young male university student who was in a semi-conscious state as a result of a vehicle accident, did not respond. This resident had been very fond of dogs prior to his injury, and the staff had been hopeful a pet visit might rouse him.

Question 2: Is Any Change in Activity Level Still Evident 10 Minutes After a Pet Visit?

The data from the Activity Observation Form were analyzed for Question Two to investigate whether the residents remain active for 10 minutes after a pet visit. A Scheffe post hoc analysis was completed on the ANOVA's reported in Table 2. This analysis confirmed a significant difference ($p<.01$) between the

TABLE 2

Proportion of Residents Exhibiting Specific Activity Before, During, and After Visit

Activity	Before	During	After	F
Eye Contact	.27	.82	.28	49.51*
Body Movement	.19	.65	.24	34.31*
Crying	.00	.01	.00	1.03
Smiling	.03	.54	.06	51.24*
Laughing	.00	.11	.01	6.72
Talking	.06	.63	.12	60.15*
Touching	.00	.47	.01	54.85*
Other Active	.30	.04	.30	14.20*
Silent	.39	.03	.39	27.09*
Sleeping	.11	.00	.01	5.78*
Other Inactive	.03	.03	.03	1.00

* F-value in analysis of variance significant at $p<.01$.

second condition, during a pet visit, and the third condition, after a pet visit. Data showed the activity level of the residents dropped significantly within 10 minutes of the pet owners and pets leaving the resident's presence.

Therefore Question Two, which asked if the residents remained active for 10 minutes after an animal visit, was answered negatively From the analysis, the conclusion could be drawn that a pet visit had only a short term effect on the activity level of the residents. As soon as the pets left, the residents returned to their previous level of activity. No significant difference was evident between the first condition, before an animal visit, and the third condition, after an animal visit.

Question 3: Is There a Difference Between the Activity Levels of Males and Females During a Pet Visit?

Two-way ANOVA's were used to determine if males and females differed in their increase in activity level during a pet visit (see Table 3). The analyses showed approximately a 20% difference in the increase in activity between males and females for eye contact, body movement, smiling, and talking. Males showed a greater increase in eye contact and body movement, whereas females showed a greater increase in smiling and talking. However, these differences were not significant. Touching and "other active", reading, listening to music, and watching television were significant ($p<.05$). The data indicated more females, 24%, touched either another human or an animal during the visit. However, more men, 10%, continued to read, listen to music, or watch television. With

TABLE 3

Proportion of Male and Female Residents Exhibiting Specific Activity Before, During, and After Visit

Activity	Gender	n	Before	During	After	F
Eye Contact	Males	31	.19	.87	.22	0.56
	Females	32	.32	.78	.24	
Body Movement	Males	31	.10	.65	.19	1.26
	Females	32	.28	.66	.28	
Smiling	Males	31	.06	.45	.06	1.07
	Females	32	.03	.62	.06	
Laughing	Males	31	.00	.06	.03	1.89
	Females	32	.00	.10	.00	
Talking	Males	31	.06	.52	.06	3.45
	Females	30	.06	.75	.19	
Touching	Males	31	.00	.35	.00	4.22*
	Females	32	.00	.59	.03	
Other Active	Males	31	.45	.10	.39	6.37*
	Females	32	.16	.00	.22	
Silent	Males	31	.32	.06	.32	0.89
	Females	32	.47	.00	.47	
Sleeping	Males	31	.10	.00	.10	0.15
	Females	32	.12	.00	.12	

* F-value in analysis of variance significant at $p<.05$.

these two exceptions, there was no significant difference in the activity levels of males and females during a pet visit.

Question 4: Are There Differences Between the Activity Levels of Males and Females 10 Minutes After a Pet Visit?

Again for Question Four, the data were analyzed by two-way ANOVA's to determine any gender differences in the change in activity for 10 minutes after a pet visit. According to this analysis, there was no significant difference in the change in activity level of the genders (see Table 3). The activity level for both genders diminished significantly. Therefore, for both males and females, the increase in activity level during a pet visit seemed to be of very short duration.

The only gender differences noted in this study were that: (a) more women touched another human or an animal during pet visits; and (b) significantly more men than women were reading, listening to music or watching television both during a pet visit as shown by the data collected under "Other Active" in Table 3.

Support Staff

Question 5: Is There Staff Support for the Pet Visitation Program?

Results of the analysis of the responses of the 36 staff surveyed (see Table 4) showed that 27 strongly disagreed that the pet visitation program was disruptive to their work schedule. Two agreed it did disrupt their work to some extent. A large majority, 33, did not feel their work load had increased as a result of the pet program. The majority, 22, felt the pets were not a sanitation

TABLE 4

Summary of Staff Responses to Statements on Pet Assisted Therapy

Question	Strongly Agree 1	2	Moderately agree 3	4	Strongly Disagree 5
(1) The Pet Visitation Program is disruptive to my work schedule.		2	5	2	27
(2) As a result of the Pet Visitation Program, I have an increased work load.			1	2	33
(3) The pets create a sanitation problem.	2	1	8	4	21
(4) The patients are more active when the pets are present.	19	7	6	1	3
(5) This Program is beneficial to the patients.	25	5	3	2	1

n = 36

problem, but some comments were received expressing concern over the animals being allowed on beds and tables where food trays would be placed. One staff member also commented the staff had no way of knowing if the animals were free of worms and eczema. Twenty-six of the staff saw the patients as more active, but 3 staff members strongly disagreed with this view.

This disagreement was probably caused by the lack of a definition for the term "activity" on the staff questionnaire. Staff apparently did not perceive eye contact, smiling, and touching as an activity because they did report an increase in these behaviours during an animal visit.

Thirty-three of the staff indicated moderate to strong agreement that the patients benefitted from the program. Many responses reflected the thoughts expressed by one staff member:

> I feel this program is very beneficial to the patients that like and/or have had pets in their homes. It's like bringing a bit of their "home environment and happy memories" to them here. The patients love the pets and are anxious to hold and play with them and often are reluctant to release them. Even the patients that claim to "dislike" animals seem to be "conveniently" around when they are.

Some staff members commented that the pets were good stimulation for the patients, brought "normality" to their lives, and were important to their well being. Others thought the pets were excellent for the patients to observe and pet, and felt that residents

were very aware of the pet visits. In general, there was good staff support for the pet program.

Pet Owners' Response

Analysis of the data from the pet owners' questionnaire, showed five of the pet owners felt the pets had a catalyzing effect on social interaction between the pet owners and the residents. The pet owners also indicated that the activity level of the patients varied a great deal from one person to another. One pet owner said she could not complete the first question because the residents' responses varied so much. Another pet owner also indicated she found it difficult to generalize. The three most frequently observed activities indicated by the seven pet owners was that most residents looked at the pet owner, looked at the pet, or gestured. Six of the seven felt these activities happened very frequently (see Table 5). The next most likely responses were smiling and stroking the animal. All of the pet owners agreed that the residents were seldom silent when visited.

Of interest in the information collected from the pet owners was the apparent stimulation animals provided to memory. The animal visits were of enough importance to help the residents keep track of the days. One pet owner indicated a resident had mentioned, "This morning I knew it was Friday and Buttons was coming." While walking through the hospital, the investigator had also noted residents knew what day of the week it was because of a pet visit.

TABLE 5

Summary of Pet Owners' Perception of Activity Levels of Residents During a Pet Visit

Activity	Very Frequently 1	2	3	4	Very Infrequently 5
Looks at Me	6	1	-	-	-
Looks at Pet	6	1	-	-	-
Gestures	6	-	-	1	-
Cries	1	-	-	1	5
Smiles	2	5	-	-	-
Laughs	3	1	3	-	-
Talks	3	3	1	-	-
Touches Me	-	5	2	-	-
Strokes Pet	5	2	-	-	-
Is Silent	-	-	-	6	1
Sleeps	-	1	1	-	5

The pets themselves also appeared to be the catalyst for lucid periods in residents suffering from Alzheimer's disease. One pet owner reported the following dramatic incident:

> One elderly lady hugs and kisses Kandy, holds her against her chest, and sings in Hungarian to her. She does this about every third visit--in between, she won't even look at the dog!!

A similar incident was observed with another resident who was 87 years old and suffered from Alzheimer's disease. She spent most of her time sitting in a wheelchair in the hallway lost in her own world. She did not speak, but would occasionally mumble incoherently and wave her hands. She did not seem to see people. Then on one of the animal visits, she suddenly noticed both the visitor and the animal. She looked into the eyes of the pet owner, and spoke clearly for several minutes telling of a dog she had owned on a farm. The next day the resident was once again staring into space.

Another pet owner indicated he had many times met residents who at first seemed unaware of their surroundings. However, the pet owner noted that as soon as the residents saw or felt the dog, they would become quite alert, smile, and might even make a comment. Still another indicated only some residents lose interest after a few minutes. She reported the majority seemed never to tire of visiting with the pet. Even though some people could not speak, they seemed content just to stroke the pet endlessly.

Pet owners also indicated through their comments that the pets facilitated interaction with the residents. One pet owner reported:

> I find it hard to visit with people who cannot communicate. I never know how to act or what to say to them. Bringing the cat helps because we can just sit together and play with her.

A second pet owner said residents who had never acknowledged her before remembered her after meeting her pet. She felt pets made it "easier to get to know the patients." Another indicated that both she and the patients were more relaxed, and as a result, "talked more and had a good time."

The data collected showed that the pet owners also felt the pet program was beneficial to the residents. All seven of the pet owners commented in response to the open ended questions that the most rewarding aspect of the program was seeing the residents' faces light up when they saw the pet owner and pet approaching. They all mentioned having a feeling that, "My visit brightens someone's lonely day." The most difficult aspects of the visits were: (a) leaving residents who wanted the pet owners and the pets to stay longer, (b) knowing some residents were failing or close to death, and (c) being physically drained from walking through all floors of the hospital.

The pet owners did not suggest any major modifications to the program. In their view, the program was meeting its objectives. As for enhancements to the pet program, all of the pet owners seemed to desire a time to share experiences. One volunteer

felt it would be helpful to meet regularly, perhaps every two months, with the other pet owners to share techniques on approaching new patients and settling animals in the hospital. This volunteer indicated some animals, especially young ones, can be difficult to settle in the hospital environment. As a result, residents who wished to stroke an animal may be disappointed if the pet wouldn't cooperate.

The pet owners also recommended that volunteers new to the program be given the opportunity to meet with long time participants to learn from their experience.

In summary, analysis of the data showed:

1. The activity level of the resident increased significantly during a pet visit.

2. The activity level of the residents decreased significantly within 10 minutes after a pet visit.

3. Significantly more females than males touched a human or animal during a pet visit.

4. Significantly more males than females were reading, listening to music or watching television during a pet visit.

5 No significant differences due to gender were noted in eye contact, smiling, laughing, or talking during a pet visit.

6. There was no significant difference in the activity level of residents before and after a pet visit.

The pet visitation program was regarded positively by both the hospital staff and the pet owners. The staff perceived the residents as happier when the animals were present. They felt the

presence of pets improved the atmosphere of the hospital and the mental alertness of the residents.

The pet owners supplied anecdotal evidence that pet visits stimulate memory. The animals themselves also seemed to facilitate interaction between the pet owners and the residents.

CHAPTER V

Conclusion

The research problem, the design of the study, and the results of the study are summarized in this concluding chapter. As well, the implication of these results and recommendations for the pet program and future research are presented.

Summary

A concern that institutionalization offers less than ideal conditions, coupled with the knowledge that many aging Canadians will be institutionalized in the coming decade created an awareness of the need to enhance the quality of life for residents. The potential for pet assisted therapy to play a part in meeting this need led to the research problem selected for study. The problem undertaken was a case and field study of the pet visitation program at an auxiliary hospital in Edmonton, Alberta. Under examination was the potential for the pet program to benefit the residents of the institution by increasing their physical activity and social interaction during and after a pet visit.

The study was designed to determine: (a) if the activity levels of residents increased during pet visits; and (b) if the residents remained active 10 minutes after a pet visit. Sixty-three residents with an average age of 80 years were observed before, during, and after a pet visit for changes in eye-contact, crying, smiling, laughing, talking, and touching. All behaviours,

except crying, when analyzed by two-way analysis of variance showed a highly significant increase during a pet visit.

Analysis of variance was also used to determine if males and females differed in their responses to the pet visits. The only response that showed a significant difference was touching with females being more prone to touching the animal or another human than males. However, the physical activity and social interaction diminished significantly for both males and females within 10 minutes of the visit. Therefore, pet assisted therapy seems to be of limited benefit in overcoming the unsatisfactory psychosocial milieu of an institution. Nevertheless, the staff supported the pet visitation program and felt it brought happiness to the residents. Generally, they did not feel the program disrupted their work; they did believe it contributed to the mental alertness of the residents.

These opinions were supported by the pet owners who mentioned the happiness the visits provided to the residents. They also commented that the animals facilitated their interaction with the residents. Some of the pet owners cited instances where the pets may have stimulated some residents' memories.

Implications

Both male and female residents of the auxiliary hospital were stimulated and entertained by their pet assisted therapy. Apparently, a pet visitation program would be of almost equal value to all residents regardless of gender. This value may be limited. Although the activities of the residents in this study increased dramatically during a pet visit, they decreased just as dramatically

shortly after the pet left. It is possible, however, that a residual effect may not have been found because the data were collected unobtrusively whereas in other studies (Corson & Corson, 1980; Andrysco, 1982) the researchers videotaped the residents and talked with them during and after a pet visit. The continuing effect may also have been lost due to the short term nature of this study, three weeks, as opposed to one year for Corson and Corson (1980) and Andrysco's (1982) studies.

Nevertheless, even a short term study should give some indication that such a program could lead to the benefits cited by other investigators: the alleviation of loneliness, depression, helplessness and social withdrawal; the improvement in morale of the institution; and the potential for creating a community out of individuals (Corson & Corson, 1980; Andrysco, 1982). If such benefits were derived from pet programs, they would certainly improve the quality of life for the residents of institutions. Unfortunately, rather than an improved quality of life, pet visitation programs appear to give both male and female residents only momentary pleasure.

It is also possible that retaining independence of thought and being responsible for the care of an animal may be of benefit in overcoming the unsatisfactory environment institutions offer. Barry (1984) has suggested that the real benefit to be gained from pet assisted therapy may be the inducement it can provide for nursing home residents to look outside themselves and take responsibility for another living thing. He says, "Such an experience seems to be health engendering, and promotes improved life satisfaction among

older people" (Barry, 1984, P.52). Perhaps this form of pet assisted therapy would prove beneficial in the long run. It would, of course, require that animals live within the institution itself, rather than coming for short visits.

One of the more interesting outcomes of this study was the effect the pets apparently had on the residents' memory. This effect could be accounted for by: (a) the novelty of seeing an animal in a hospital setting; (b) the alleviation of boredom; or (c) a deep attachment to pets. Whatever the reason, other nursing homes within Alberta have also noted that pet animal programs seemed to be of particular help for patients with Alzheimer's disease (Blake, 1986). What may be of more value is the apparent catalyzing effect, reported by the pet owners, that the pets seemed to have on the social interaction between the pet owners and the residents. Without the pets acting as facilitators of interaction, the pet owners probably would not feel as comfortable visiting the hospital.

Perhaps better than any form of therapy for improving institutional life would be a political will that created less reliance on institutionalization. McDaniel says most mental disorders in the elderly "result from depression and other non-organic causes, rather than from deterioration of bodies and brains as a result of aging" (McDaniel, 1986, p.82). She also says all too frequently an older person who is relatively healthy is institutionalized because of the shortage of home care and community services. The Premier's Commission on Future Health Care for Albertans (1989) has recognized this problem. It encourages the education of more health care workers, and recommends using new technologies to make the

home a communication centre linked to health and welfare services by electronic means. Such a program would not only be more economical than institutionalization, it would also make de-institutionalization possible for many elders with an accompanying independence and enhanced quality of life.

The Premier's Commission also recognized that chronic illness, to which elders are more prone, may largely be the result of inappropriate lifestyle and personal behaviour. The Commission suggested motivation and education as the most effective method for dealing with this problem The preparation and delivery of such education would be an appropriate role for adult educators to play. For example, courses in weight loss, exercise routines, cooking for one, and heart attack prevention could be taught. Such education might well reduce the need for institutionalization and the need for therapies to overcome its negative effects.

Recommendations for the Pet Program

The hospital staff and the pet owners agreed that the Pet Assisted Therapy Program at the auxiliary hospital was meeting its objective of offering residents a stimulating and entertaining program which encouraged social interaction through companionship. Some modest changes are recommended for consideration by the hospital, however, in view of the feedback received. These include:

1. Facilitating the assimilation of new volunteers into the program and the training of their pets by holding a bi-monthly meeting. The new volunteers could then share their experiences

with long-term volunteers and receive education on pet handling or other topics of mutual interest.

It would also be of help to discuss the fatigue experienced by some pet owners and pets as a result of visiting all the floors of the hospital on one day. An alternative procedure for scheduling visits could probably be found. To meet these and other needs of the pet owners, a set meeting time of once every two months is suggested.

2. Providing staff with information on the health of the pet animals and the likelihood of their presence contributing to disease or sanitation problems might ease the staff's concerns. Keeping the animals off the beds and away from food tables is difficult to deal with as it is the residents themselves who coax the animals up on their beds.

3. Continuing the pet program at the hospital because of: (a) the obvious enjoyment of the residents; (b) the increased activity level of the residents during a pet visit; and (c) the facilitation of social interaction between the residents and the pet owners, the pet program has value. This facilitation of social interaction may be the most important aspect of pet programs because the owners are rewarded for their efforts and continue to visit the hospital on a regular basis.

Recommendations for Future Research

The pet program at the auxiliary hospital was of benefit to the residents. However, these benefits were apparent only while the animals were present. No long term benefits to alleviate the

negative effects of institutionalization were found other than a possible stimulation to memory. Therefore, future research is recommended in the following areas:

1. The effects of pet facilitated therapy on individuals suffering from Alzheimer's disease.

2. A longitudinal study on the pet program at the auxiliary hospital to determine if benefits from the program do exist in the longer term

3. The effects of keeping pets within institutions and allowing residents some responsibility for their care.

4. As a role for adult education, research into the type of courses needed to prevent institutionalization, including research into the age groups at which such courses should be aimed. Hopefully then, the need for institutionalization and the therapies needed to overcome its negative effects could be reduced.

The researcher hopes that the outcome of this study will be of help to those who are involved with addressing the problems of an aging population. It is well known that our society will have an increased number of elderly people needing health care. The methods taken to provide them with that care will affect all members of society. Cost effective means to provide care and to improve the quality of life of those who are institutionalized must be found.

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APPENDIX A

Pet Owners' Comments on Pet Assisted Therapy

Instructions:

Please circle a number from 1 to 5, indicating how strongly you agree or disagree with the following statements.

1 = strongly agree

3 = moderately disagree

5 = strongly disagree

Acitivity	Very Frequently 1	2	3	4	Very Infrequently 5
Looks at me	1	2	3	4	5
Looks at pet	1	2	3	4	5
Gestures	1	2	3	4	5
Cries	1	2	3	4	5
Smiles	1	2	3	4	5
Laughs	1	2	3	4	5
Talks	1	2	3	4	5
Touches me	1	2	3	4	5
Strokes pet	1	2	3	4	5
Is silent	1	2	3	4	5
Sleeps	1	2	3	4	5

Other Comments: _____

_____

_____

2. Have you had any unusual or dramatic experiences during your visits? Please explain.

3. What have you found most difficult about your visits?

4. What have you found most rewarding about your visits?

5. What changes would you suggest?

6. Any other comments?

APPENDIX B

STAFF COMMENTS ON PET ASSISTED THERAPY

Instructions:

Please circle a number from 1 to 5, indicating how strongly you agree or disagree with the following statements.

1 = strongly agree
3 = moderately disagree
5 = strongly disagree

1. The pet visitation program is disruptive to my work schedule.

Strongly Agree				Strongly Disagree
1	2	3	4	5

2. As a result of the pet visitation program, I have an increased work load.

Strongly Agree				Strongly Disagree
1	2	3	4	5

3. The pets create a sanitation problem.

Strongly Agree				Strongly Disagree
1	2	3	4	5

4. The patients are more active when the pets are present.

Strongly Agree				Strongly Disagree
1	2	3	4	5

5. This program is beneficial to the patients.

Strongly Agree				Strongly Disagree
1	2	3	4	5

6. Other Comments: _____

APPENDIX C

Unusual Incident Form

Date _____

Patient Number _____

Sex _____

Age _____

NATURE OF INCIDENT

APPENDIX D

ACTIVITY OBSERVATION FORM

Date _____

Patient Number _____

Sex _____

Age _____

1. Before visit:

   A. Active

      (a) eye contact _____

      (b) body movement _____

      (c) crying _____

      (d) smiling _____

      (e) laughing _____

      (f) talking _____

      (g) touching _____

      (h) other _____

   B. Inactive

      (a) silent _____

      (b) sleeping _____

      (c) other _____

Other Comments: _____

_____

2. During visit:

   A. Active

      (a) eye contact _____

      (b) body movement _____

      (c) crying _____

(d) smiling _____

(e) laughing _____

(f) talking _____

(g) touching _____

(h) other _____

B. Inactive

(a) silent _____

(b) sleeping _____

(c) other _____

Other Comments: _____

_____

3. After visit:

A. Active

(a) eye contact _____

(b) body movement _____

(c) crying _____

(d) smiling _____

(e) laughing _____

(f) talking _____

(g) touching _____

(h) other _____

B. Inactive

(a) silent _____

(b) sleeping _____

(c) other _____

Other Comments: _____

_____